

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-63 (Canceled).

Claim 64 (Previously Presented): A method for production of a finished component of a machine from an original component having a defect, comprising:

removing a portion defining the defect to form a recess portion;

depositing a porous deposition via electric spark discharge from a first electrode in an electric spark machine to fill the recess portion with the porous deposition by positioning the recess portion opposed to the first electrode in the electric spark machine; and

densifying the porous deposition via electric spark discharge from a second electrode in the electric spark machine by positioning the porous deposition opposed to the second electrode in the electric spark machine to form a high-density thin film.

Claim 65 (Previously Presented): The method of claim 64, wherein the removing is carried out via electric spark discharge from the second electrode in the electric spark machine by positioning the portion defining the defect opposed to the second electrode in the electric spark machine.

Claim 66 (Previously Presented): The method of claim 64, further comprising:

machining the porous deposition such that the porous deposition is shaped to a predetermined dimension before densifying the porous deposition.

Claim 67 (Previously Presented): The method of claim 66, wherein the machining is carried out via electric spark discharge from the second electrode in the electric spark

machine by positioning the porous deposition opposed to the second electrode in the electric spark machine.

Claim 68 (Canceled).

Claim 69 (Previously Presented): The method of claim 64, further comprising:
depositing a hard thin film via electric spark discharge from a third electrode in the electric spark machine on the high-density thin film by positioning the high-density thin film opposed to the third electrode in the electric spark machine.

Claim 70 (Currently Amended): The method of claim 66, further comprising:
depositing a hard thin film via electric spark discharge from an electrode of Si in the electric spark machine on the high-density thin film by positioning the high-density thin film opposed to the electrode of Si in the electric spark machine and wherein the electric spark machine includes a process liquid including alkane ~~hyrdcarbons~~ hydrocarbons.

Claim 71 (Previously Presented): The method of claim 64, further comprising:
depositing an intermediary porous thin film via electric spark discharge from the first electrode in the electric spark machine on the recess portion by positioning the recess portion opposed to the first electrode in the electric spark machine after removing the portion defining the defect but before depositing the porous deposition; and
densifying the intermediary porous thin film via electric spark discharge from the second electrode in the electric spark machine by positioning the intermediary porous thin film opposed to the second electrode in the electric spark machine to form an intermediary high-density thin film.

Claim 72 (Previously Presented): The method of claim 64, wherein the second electrode consists essentially of one selected from the group consisting of graphite, tungsten alloys, and copper alloys.

Claim 73 (Previously Presented): The method of claim 64, wherein the first electrode includes a tip end portion larger than the portion defining the defect by an amount of 0.02mm or more and 0.3mm or less.

Claim 74 (Previously Presented): The method of claim 66, further comprising: peening the machined deposition.

Claim 75 (Previously Presented): The method of claim 64, further comprising: forming a main body of the original component by casting or forging.

Claim 76 (Previously Presented): A machine component produced by the method of claim 64.

Claim 77 (Previously Presented): A gas turbine engine comprising a machine component produced by the method of claim 64.

Claim 78 (Currently Amended): A method for production of a finished component of a machine from an original component having a defect, comprising:
removing a portion defining the defect to form a recess portion;

depositing an intermediary porous thin film via electric spark discharge from a first electrode in an electric spark machine on the recess portion by positioning the recess portion opposed to the first electrode in an electric spark machine;

densifying the intermediary porous thin film via electric spark discharge from a second electrode in the electric spark machine by positioning the intermediary porous thin film opposed to the second electrode in the electric spark machine to form an intermediary high-density thin film;

depositing a porous deposition via electric spark discharge from the first electrode in a electric spark machine on the intermediary high-density thin film by positioning the intermediary high-density thin film opposed to the first electrode in the electric spark machine; and

depositing a hard thin film via electric spark discharge from an electrode of Si in the electric spark machine on the porous deposition by positioning the porous deposition opposed to the electrode of Si in the electric spark machine, wherein the electric spark machine includes a processing liquid including alkane ~~hyrdocarbons~~ hydrocarbons.

Claim 79 (Previously Presented): The method of claim 78, wherein the removing is carried out via electric spark discharge from the second electrode in the electric spark machine by positioning the portion defining the defect opposed to the second electrode in the electric spark machine.

Claim 80 (Previously Presented): The method of claim 78, further comprising:
machining the porous deposition such that the porous deposition is shaped to a predetermined dimension.

Claim 81 (Previously Presented): The method of claim 80, further comprising:
densifying the porous deposition via electric spark discharge from the second
electrode in the electric spark machine by positioning the porous deposition opposed to the
second electrode in the electric spark machine to form high-density thin film.

Claim 82 (Canceled).

Claim 83 (Previously Presented): The method of claim 80, further comprising:
peening the machined deposition.

Claim 84 (Currently Amended): An electric spark machine, comprising:
a table configured to be controllably movable in any direction on a plane, the table
including a jig configured to support a workpiece;
a processing head configured to be controllably movable with respect to the table in a
direction perpendicular to the plane, the processing head including a first holder to support a
first deposition electrode and a second holder to support a melting electrode; and
an electric power source to supply electricity to the processing head so as to generate
electric spark discharge between the workpiece and both the first deposition electrode and the
melting electrode,

wherein the deposition electrode is a molded electrode configured to deposit a deposit
material on the workpiece, and

wherein the melting electrode is a solid material electrode such that none of the solid
material is deposited on the workpiece.

Claim 85 (Currently Amended): An electric spark machine, comprising:

a table including a jig configured to support a workpiece;
a processing head configured to be controllably movable with respect to the table in both vertical and horizontal directions, the processing head including a first holder to support a first deposition electrode and a second holder to support a melting electrode, the processing head being configured to detachably support the first holder and the second holder;
a replacement unit configured to selectively attach any of a first holder and a second holder to the processing head and exchange the attached holder for the other holder; and
an electric power source to supply electricity to the processing head so as to generate electric spark discharge between the [[the]] workpiece and both the first deposition electrode and the melting electrode,

wherein the deposition electrode is a molded electrode configured to deposit a deposit material on the workpiece, and

wherein the melting electrode is a solid material electrode such that none of the solid material is deposited on the workpiece.